

# Cold Weather Injury Prevention

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Smithdeal



# Terminal Learning Objective

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- ▶ As a Unit Safety Officer participating in cold weather classes, you will gain knowledge on how to protect yourself and your men from cold weather injuries IAW AR ..1-301.....



# Human Metabolic Rates

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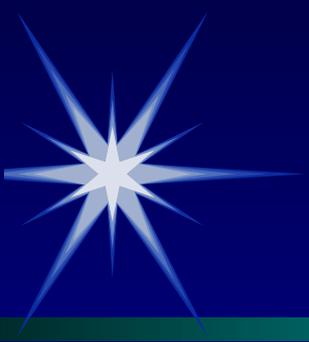
- ❑ BTU - British Thermal Unit
- ❑ Resting - 350 BTU's Per hour
- ❑ Walking - 900
- ❑ Walking uphill - 1200
- ❑ Long race - 5000



# Cold Injury Factors

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- ❑ **Defensive Position - Static**
- ❑ **Age <17 or >40**
- ❑ **Fatigue level**
- ❑ **Training and experience**
- ❑ **Nutrition, activity, drugs and medication, especially alcohol.**



# Injuries

- ❑ Dehydration
- ❑ Trenchfoot
- ❑ Frostbite
- ❑ Hypothermia



# Dehydration

- \*To lose or be deprived of water or the elements of water.
- \*As prevalent in cold regions as in hot, dry areas.
- \*Difficulty in realizing dehydration in cold weather with heavy absorbent clothing.



# Trenchfoot

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- ▶ \*Thermal injury sustained as a result of exposure to cold, short of freezing, in a damp or wet environment.
- ▢ \*Usually occurs between 32 and 50 degrees Fahrenheit.
- ▢ \*Awareness and hygiene are best preventive measures.



# Frostbite

- ▶ \*Freezing of a body part by exposure to temperatures below freezing.
- ▢ \*Strong and sustained winds will greatly increase the probability of injury .
- ▢ \*It is easier to prevent than to treat.
- ▢ \*Difficult to detect and realize the oncoming symptoms.



# Hypothermia

- ▶ \*Gradual or rapid cooling of the body core temperature.
- ▢ \*Hypothermic damage to cells may start at
  - ▢ 95 degrees F.
  - ▢ \*Early stage symptoms provide no negative abnormalities--feeling of well-being, confidence.



# Self Protection

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- ❑ Extremities, digits
- ❑ The human body does not dissipate heat in a uniform fashion
- ❑ Neck and head - No blood control provided. Hair provides covering.



# Protection Cont..

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- ❑ Keep warm and dry.
- ❑ Keep clothing clean.
- ❑ Cover exposed skin.
- ❑ Recognize signs and symptoms of cold injuries.



# Keeping Warm

- ❑ Cold Wx Clothing mechanics - uses a trapped layer of air as insulation.
- ❑ Layer clothing.
- ❑ Use what's issued.
- ❑ Wool, Polypro, Down Fibers, Fiber fill.



# Cold-Injury Prevention Checklist

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- ▶ 1. Is safety included in planning?
- ▣ 2. Are leaders trained in cold-injury prevention, to include carbon monoxide?
- ▣ 3. Are soldiers trained in cold wx opns?
- ▣ 4. Are current wx conditions monitored?
- ▣ 5. Do soldiers use the buddy system?



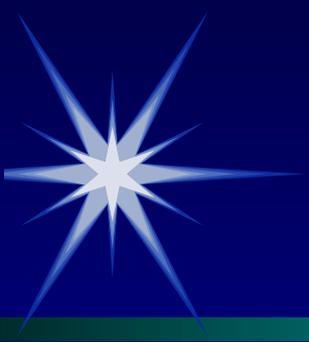
# Checklist Continued

- 6. Is suitable cold weather gear available, serviceable, and utilized?
- 7. Is proper hygiene practiced?
- 8. Are soldiers not allowed to wear wet clothing unnecessarily?
- 9. Do soldiers change socks regularly?



# Checklist Cont..

- 10. Are personnel with previous cold wx injuries monitored closely?
- 11. Are soldiers trained to recognize early warning signs, and perform first-aid?
- 12. Are soldiers aware that alcohol consumption increases the risk of cold injury?



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The End

Any Questions?